

REC'D
PUBLIC UTILITIES COMM.
STATE OF CALIF.

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FILE NO. _____

INTERSTATE COMMERCE COMMISSION
WASHINGTON

REPORT NO. 3619
PIEDMONT AND NORTHERN RAILWAY COMPANY
IN RE ACCIDENT
AT GREER, S. C., ON
MARCH 22, 1955

SUMMARY

Date:	March 22, 1955
Railroad:	Piedmont and Northern
Location:	Greer, S. C.
Kind of accident:	Derailment
Train involved:	Freight
Train number:	47
Engine number:	Diesel-electric unit 1606
Consist:	5 cars, caboose
Estimated speed:	20 m. p. h.
Operation:	Timetable and train orders; yard limits
Track:	Single; tangent; level
Weather:	Clear
Time:	4 p. m.
Casualties:	2 killed; 3 injured
Cause:	Open switch due to tampering

INTERSTATE COMMERCE COMMISSION

REPORT NO. 3619

IN THE MATTER OF MAKING ACCIDENT INVESTIGATION REPORTS
UNDER THE ACCIDENT REPORTS ACT OF MAY 6, 1910.

PIEDMONT AND NORTHERN RAILWAY COMPANY

May 9, 1955

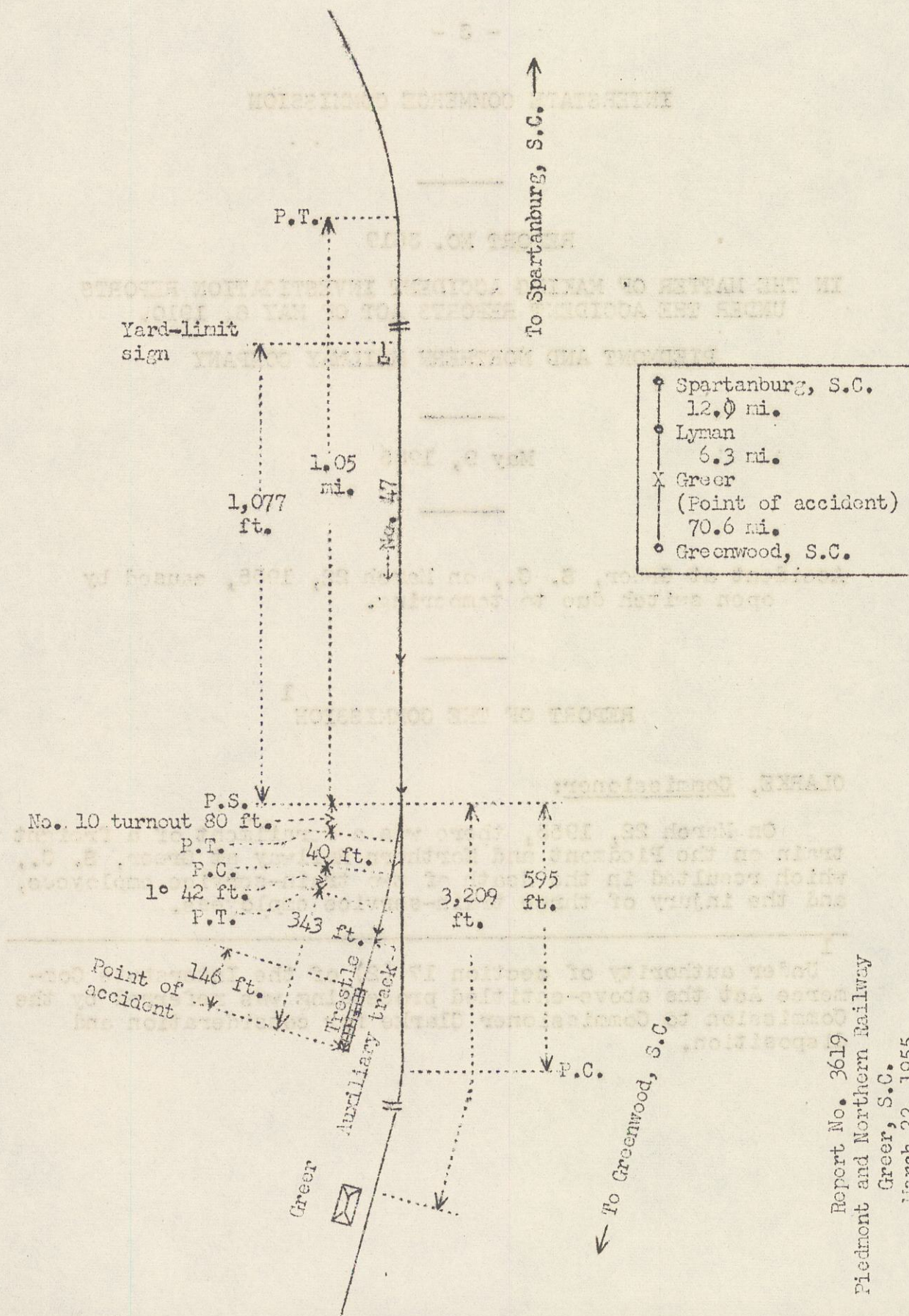
Accident at Greer, S. C., on March 22, 1955, caused by
open switch due to tampering.

REPORT OF THE COMMISSION¹

CLARKE, Commissioner:

On March 22, 1955, there was a derailment of a freight train on the Piedmont and Northern Railway at Greer, S. C., which resulted in the death of two train-service employees, and the injury of three train-service employees.

¹
Under authority of section 17 (2) of the Interstate Commerce Act the above-entitled proceeding was referred by the Commission to Commissioner Clarke for consideration and disposition.



Report No. 3619
Piedmont and Northern Railway
Greer, S.C.
March 22, 1955

Location of Accident and Method of Operation

This accident occurred on that part of the South Carolina Division extending between Spartanburg and Greenwood, S. C., 88.9 miles. In the vicinity of the point of accident this is a single-track line, over which trains are operated by timetable and train orders. There is no block system in use. At Greer, 18.3 miles south of Spartanburg, an auxiliary track 505 feet in length diverges westward from the main track and terminates on a trestle used for unloading coal. The switch of this auxiliary track is located in a shallow cut at a point 1,077 feet south of the north yard-limit sign and 3,209 feet north of the station at Greer. It is facing-point for south-bound movements. Immediately south of the switch the main track and the auxiliary track are laid on a fill. On the auxiliary track this fill extends to the north end of the trestle. The trestle is 146 feet long and the maximum height of approximately 18 feet 6 inches above ground level is at the end of the auxiliary track. The accident occurred at the south end of the auxiliary track. The main track is tangent throughout a distance of 1.05 miles immediately north of the auxiliary-track switch and 595 feet southward. From the north on the auxiliary track there are, in succession, a No. 10 turnout to the right 80 feet, a tangent 40 feet, a 1° curve to the right 42 feet, and a tangent 343 feet to the end of the track. The grade for south-bound trains averages 0.80 percent ascending throughout a distance of 1.23 miles immediately north of the auxiliary-track switch, and it is 0.88 percent ascending at the switch. The grade on the auxiliary track is, successively, 0.89 percent ascending a distance of 100 feet from the switch, 1.00 percent descending 150 feet, 0.47 percent descending 100 feet, 0.70 percent ascending 50 feet, 0.50 percent ascending 50 feet, and level 55 feet to the end of the trestle.

The switch stand at the auxiliary-track switch is of the ground-throw intermediate-stand type. It is located 9 feet 10 inches west of the center-line of the track and is provided with both red and white targets. When the switch is lined for entry to the auxiliary track a two-lobe red target 30 inches in length with a maximum height of 14 inches through the lobed portion at each end is displayed at right angles to the track. When the switch is in position for movement on the main track a white target 30-1/2 inches long and 9 inches wide, pointed at the ends and attached to the spindle at an angle of approximately 45 degrees, is displayed in the direction of an approaching train. The centers of the targets are 7 feet above the tops of the ties. Keepers of the latch-stand type are provided on the head-block ties

to secure the switch in either normal or reverse position. A standard switch lock is provided for securing the latch of the keeper when the operating lever is in normal position.

The maximum authorized speed for freight trains is 50 miles per hour.

Description of Accident

No. 47, a south-bound second-class freight train, consisted of Diesel-electric unit 1606, one car, and a caboose. This train departed from Spartanburg at 1 p. m., 15 minutes late. At Lyman, 5.7 miles north of the point of accident and the last open office, four cars were added to the train. It departed from this point at 3:45 p. m., 5 minutes late, and while moving at an estimated speed of 30 miles per hour it was diverted to the auxiliary track at Greer. The locomotive and the first three cars were derailed at the south end of the trestle, and the front wheels of the front truck of the fourth car were derailed on the trestle.

The locomotive stopped in line with the auxiliary track, with the front end 77 feet south of the south end of the trestle. The front end penetrated the ground to a depth of 5 feet. The control compartment and the hood at the rear of the locomotive were struck and crushed by other derailed equipment. The trucks of the first three cars were displaced during the derailment, and these cars stopped in various positions on the ground adjacent to the end of the trestle. The fourth car stopped with the derailed wheels of the front truck on the trestle and 57 feet north of the end of the auxiliary track. The locomotive and the first car were considerably damaged. The second and third cars were somewhat damaged, and the fourth car was slightly damaged.

The engineer and the conductor were killed. The front brakeman, the flagman, and a student engineer were injured.

The weather was clear at the time of the accident, which occurred about 4 p. m.

Diesel-electric unit 1606 is of the road-switcher type. The control compartment is equipped with two control stations for operation from the right hand side while moving in either direction.

Discussion

As No. 47 was approaching the point where the accident occurred the locomotive was being operated by a student engineer under the supervision of the regularly assigned engineer. The student engineer was maintaining a lookout ahead from the control station on the right side of the control compartment. The assigned engineer and the conductor were seated on the left side, and the front brakeman was seated in the rear of the control compartment. The flagman was in the caboose. The surviving members of the crew on the locomotive estimated that the speed was about 30 miles per hour. The brakes of this train had been tested before departure from Spartanburg. Switching service was performed en route and four cars were added to the train at Lyman. The student engineer said that as the locomotive approached the auxiliary track his attention was attracted to the switch. When he observed that it was lined for entry to the auxiliary track he immediately shut off power to the traction motors, made an emergency application of the brakes, and called a warning. He estimated that the locomotive was then 580 feet north of the switch. He said that the speed was reduced to approximately 20 miles per hour when he alighted from the locomotive at a point about 250 feet south of the auxiliary-track switch, but he did not think it was further reduced before the derailment occurred. The front brakeman jumped off the locomotive at a point immediately north of the trestle. The flagman said that the brakes became applied in emergency a few seconds before the train entered the auxiliary track.

After the accident occurred the switch of the auxiliary track was found to be lined for entry to the auxiliary track. The operating lever was resting on the latch of the latch stand on the north head-block tie. The switch points were not damaged. The switch lock was missing.

The investigation disclosed that the switch of the auxiliary track involved was opened subsequent to 10:35 a. m. on the day of the accident, at which time No. 48, a north-bound freight train, passed over the switch. Members of the crew on the locomotive of this train said that the switch was in normal position but they did not observe whether the switch lock was then in place. The auxiliary track involved has not been in commercial use for a period of approximately 2 years. During this period it has been used occasionally for the storage of cars of carrier-owned material. The last

movement on the auxiliary track prior to the day of the accident was on March 1, 1955. On that day the locomotive of No. 48 entered the track to remove an empty car. The front brakeman said that the switch lock was in place on the auxiliary-track switch at that time. He said that after the car was removed from the track he lined and locked the switch in normal position. The switch and switch lock were last inspected by the section foreman on March 1, 1955, and no defective condition was found.

The superintendent said that law enforcement officers had obtained an admission from a young boy that on the afternoon of March 19, 1955, he and two other boys from 12 to 14 years of age broke open the switch lock at the auxiliary-track switch. This boy said that he and the other boys afterward replaced and locked the lock, and that they were not in the vicinity of the switch on the day of the accident. At the time this investigation was completed the identity of the person or persons who opened the switch on the day of the accident had not been determined.

Tests were made on March 24, 1955, to ascertain the distance at which the position of the auxiliary-track switch involved could be determined from an approaching south-bound locomotive. A locomotive of the same type as the locomotive of No. 47 was used in these tests. Observations were made at approximately 4 p. m., under conditions of light and weather similar to those which prevailed at the time of the accident. It was found that when the switch was lined for entry to the auxiliary track the red switch target was visible at a distance of 1,077 feet. When the switch was in normal position the white target was visible at a distance of 618 feet.

This railroad formerly was operated by electric power transmitted through a catenary system. Diesel-electric motive power replaced electrically propelled motive power in 1951. Firemen are not employed, and train-service employees are promoted to the position of locomotive engineer. Employees qualifying for promotion are required to operate locomotives in freight-train service under the supervision of assigned engineers and to pass the required train rules and mechanical examinations. The student engineer in the instant case entered the service of the carrier as a brakeman on January 15, 1946. At the time of the accident he was regularly assigned as a flagman in freight service and had received a permit authorizing him to operate locomotives preparatory to qualifying for promotion.

Cause

This accident was caused by an open switch due to tampering.

Dated at Washington, D. C., this ninth day of May, 1955.

By the Commission, Commissioner Clarke.

(SEAL)

HAROLD D. McCOY,

Secretary.

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Donor

This account was opened by an open check book to
temporarily.

Donor at Washington, D. C., this ninth
day of May, 1958.

By the Commission, Commissioner Charles

WILLIAM D. KERRY

(SEAL)

Secretary